

# **e-Manifest System User Meeting**

November 19-20, 2008  
Washington, DC

# Introduction

- Matt Hale, Director of Office of Solid Waste

# Agenda

## Wed 11/19

8:30 AM	Introduction
8:45 AM	Agenda, Objectives
9:00 AM	e-Manifest Current Approach
9:45 AM	User Needs
10:00 AM	Break
10:15 AM	Section 1 & 2 Breakouts
12:00 PM	Lunch
1:00 PM	Section 1 & 2 Breakouts
3:00 PM	Break
3:15 PM	Section 1 & 2 Breakouts
5:00 PM	Sections Report Out
5:30 PM	Adjourn

## Thu 11/20

8:30 AM	Announcements
8:45 AM	Section 1 & 2 Breakouts
10:00 AM	Break
10:15 AM	Section 1 & 2 Breakouts
11:30 AM	Lunch
12:30 PM	Sections Report Out
1:00 PM	User Fees
1:30 PM	Next Steps
2:00 PM	Adjourn

# Objectives

- Provide input from users on their needs for an e-Manifest system, including the performance objectives and desired functionalities for the system.
- Provide input on system performance metrics.
  - Examples:
    - My business must be able view all of my open manifests within 90 seconds of clicking on the link.
    - I must receive confirmation from the e-Manifest system that my request for ... was completed within 24 hours.
    - I must be able to process 50,000 e-Manifests per day.
    - A critical error that is preventing me from creating an e-Manifest must be resolved in ... hours.
    - My state needs manifest data within 10 days of an e-Manifest's acceptance by the TSDF.
- Ultimately, EPA's professional and contractual judgment will be used to finalize requirements

# e-Manifest System Current Approach

e-Manifest Users' Meeting  
November 19 – 20, 2008

*Richard LaShier*  
*EPA Office of Solid Waste*

# Purpose

- Review charge from May 2004 Public Meeting
- Describe the “Four Core” areas of project focus
- Update the legislative progress
- Update the regulatory progress
- Discuss the 4-State e-Manifest Pilot
- Discuss Our Goal: Define the performance objectives and metrics for national system build by IT contractor
  - What functionalities do we want in the system?
  - How do we want the system to behave?
  - What performance metrics for the system?

# May 2004 Stakeholder Meeting

- The decentralized e-Manifest approach we proposed in May 2001 was roundly criticized by commenters
  - We held the 2004 public meeting to try to reach consensus on a new direction for the e-Manifest project
- Key Messages from the 2004 Stakeholder Meeting:
  - Strong consensus for a consistent, national system,
  - Sense that e-Manifest should be optional for users,
  - Direction to keep initial system build focused on core manifest tracking and data distribution services,
  - User support for funding system build and operation thru service fees
    - Caveat: Transparent, earmarked to system, not a “tax”

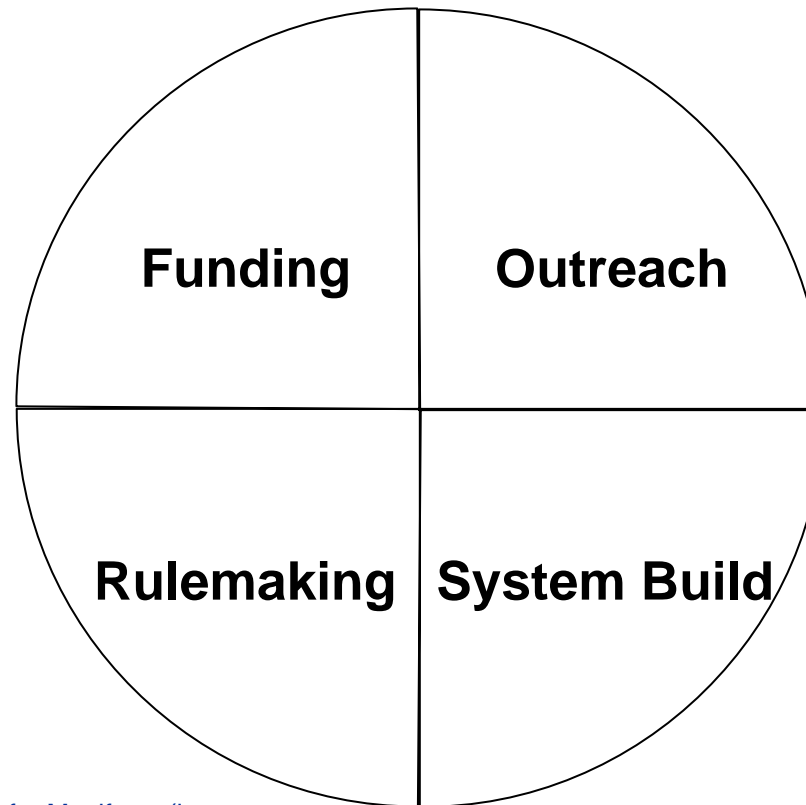
# Core Activities to Develop e-Manifest

- **Funding/Legislation**

- user fee legislation or new appropriations
- CPIC, Business Case and Budget Request

- **Outreach**

- User and state needs and requirements
- Four-State Pilot
- Governance of system change process
- Accountability for fees and performance



- **Rulemaking –**

- 2001, 2006, 2008 FR notices on key policy issues
- Pending Final Rule authorizing use of e-Manifests (in FAR)

- **System Build**

- Performance and operation requirements
- Initiate Procurement and award contract
- CDX integration
- Compliance with Federal IT policies
- Phased Development



# Electronic HW Manifest Establishment Act

- Senate Bill S.3109 introduced in Senate on June 10, 2008
  - Approved by Boxer's EPW Committee on July 31, 2008
  - Adopted by full Senate by unanimous consent on September 26, 2008
  - No companion bill in House this year
- Key Provisions of Senate Bill:
  - Use of e-Manifest would be at option of users
  - Scope provisions:
    - Covers Federal RCRA and state-regulated wastes subject to manifest
    - Extends to collection and processing of final TSDF copy of paper manifest
  - Authorizes EPA to collect and retain user fees for system costs
    - Fee authorized for electronic or paper submissions to system
    - Fund established in Treasury for deposit of fees
  - Authorizes performance-based contract with IT vendor to build system and recover costs
  - Authorizes uniform effective date for system in all states
  - Specifies milestones for EPA actions:
    - 1 year to issue rules, 3 years to establish system
  - Annual audit and biennial financial reporting to Congress
  - Requires System Governing Board (EPA, States, users) to oversee system

# Status of Regulation

- Final Rule needed to authorize use of e-Manifests
- Key regulatory issues include:
  - Authorizing the electronic format/data exchange requirements
  - Determining enforceable and feasible electronic signature method
  - Determining when the e-Manifest can be used by waste handlers
  - Collecting and processing the final copies of paper manifests
  - Balancing public access and CBI interests with respect to customer data
  - Extending coverage to all RCRA and state-regulated wastes
  - Ensuring consistent implementation among all states
- Final Rule is currently in Final Agency Review stage
  - At Nov. 2007 FAR meeting, EPA offices could not agree on electronic signature approach
  - Additional public comments solicited (Feb. 2008) on CBI issue
- **Final Rule and system build are contingent on the legislation**

# Four-State e-Manifest Pilot

- Agencies in MI, MA, MN, and NJ were awarded an EPA Challenge Grant to develop a prototype central manifest tracking system and related data exchange capabilities.
  - Use the Exchange Network as the enabler,
  - Eliminate current paper processing burden for industry & states,
  - Demonstrate feasibility of electronic cradle-to-grave tracking,
  - Improve access to data for all data consumers
  - Assist EPA regulatory workgroup by testing recommendations
  - Engage industry stakeholders in design, analysis, and testing
  - Three month period of pilot testing now underway
  - A “Lessons Learned” Report will summarize the experience

# Pilot Project (continued)

- The Pilot was made possible by the sustained cooperation of the following participants:
  - States: MI Depts. of Environmental Quality and Information Technology, NJ Dept. of Environmental Protection, MA Dept. of Environmental Protection, and MN Pollution Control Agency,
  - Generators: Access Business Group, Consumers Energy
  - Transporters: Environmental Recycling Group, EQ Industrial Services, Marine Pollution Control, Safety-Kleen, Triumvirate Env., and Veolia ES
  - TSDF Facilities: Enviro-Safe, Michigan Disposal Waste Treatment Plant, Safety-Kleen, Veolia ES, and Wayne Disposal
- The Pilot features four distinct user interfaces:
  - Desktop Web Site (Fully functional)
  - Mobile Web Site (View and report only)
  - Mobile Client (Create, update, view, sign, and report)
  - Industry Web Service System Interface (create, update, attach images)

## Phased Development of e-Manifest

- e-Manifest will be developed in phases, with initial focus on core waste tracking and data transfer functions
- Phase 1 Scope:
  - Establish IT system for basic domestic manifest processing
  - Enable data sharing through Exchange Network
  - Begin processing electronic manifests and collecting service fees to reimburse system build and fund operations
- Phase 2 Possible Enhancements:
  - Orderly transition to collection of final paper manifest copies
  - Integration with Biennial Reporting of waste receipts
  - Integration with Transboundary Waste tracking programs
  - Integration with Railroad's Electronic Waybill system
  - Exception and Discrepancy Reporting, LDR notices

# Where Are We?

- We lack enabling legislation, but prospects seem good for success in the 111<sup>th</sup> Congress
- We will continue to develop the final rule with our work group and take the process as far as we can pending legislation.
- We are beginning with this meeting to plan for the national system procurement:
  - What functionalities and business requirements should the system support?
  - What data quality objectives and features?
  - What performance metrics should guide the contract?
- We will use the Business Requirements definition process completed for the 4-State Pilot as a starting point for this meeting

# Not For Discussion Today

- Phase 2 items
- e-Signatures technologies and processes
  - Will be driven by Federal and EPA regulations and requirements
- Confidential Business Information (CBI)
  - Determination on the classification on e-Manifest data
  - Driven by 40 CFR 2.204, 2.205, 2.208

# General User Needs



# Pilot Survey Results

- Pilot project researched general needs through a survey
- Project surveyed industry to assess business processes and technology feasibility
- 37 participants included generators, transporters, and TSDFs.
- Key Findings
  1. Majority of manifests created/initiated by someone other than generator
  2. Majority of industry stakeholders have a process and/or computer system for manifests
  3. Electronic submission of manifests to states is the most valuable potential capability
  4. Most industry locations (offices) have a computer with internet access. Most transporter vehicles are not equipped with electronic devices

# Pilot Survey Results

- Key Findings (cont)
  - 5. About half of industry stakeholders would consider acquiring new equipment/technologies.
  - 6. PIN/Password is the most feasible approach for electronic signatures
  - 7. General support for move to electronic manifests, but there are still concerns
    - Cost
    - Signature complexity
    - Responsibility and burden on transporters
    - Redundancy with existing industry systems
    - Equipment failure

# General User Needs

- State pilot system provides a good straw man for discussion
  - State pilot doesn't address all national issues
  - Want open discussion
  - Not locked into pilot design and processes
- What are the general needs of the manifest community?
    - Generators?
    - Transporters?
    - TSDFs?
    - States?
    - EPA?

# Process For Gathering Recommendations

- e-Manifest System User Meeting
  - Participation in today's meeting
  - Break into sections for detailed discussions
  - Final plenary to review breakouts and discuss joint topics
- Follow-up conference calls
  - Give participants time to analyze requirements and organize thoughts
  - Opportunities for more discussion on recommendations
- Contractor will document recommendations for EPA consideration
- EPA will make final decisions on recommendations

# Section Breakouts

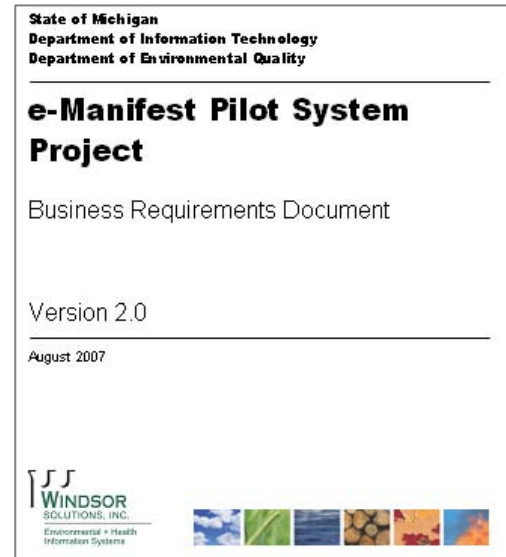
- Splitting into two breakout sections to gather detailed needs
  - Lots of material to cover in a short time
  - Prefer good mix in each section
  - Report out at the end of each day
  - More opportunities for comments in the subsequent conference calls
- Section 1
  - e-Manifest workflow
  - Business processes
  - Desired system capabilities
  - Functional needs
- Section 2
  - Administrative needs
  - Data access needs
  - Data quality needs

# Section #1

**e-Manifest Workflow, Business Process and Desired System Capabilities and Functional Requirements**

# Section #1 Facilitation Process

- Review the basic e-Manifest business processes
  - Most business processes based on the state pilot system
  - Refer to the “**e-Manifest Pilot System Business Requirements Document**” (Requirements Document)
  - Pages numbers in upcoming slides refer to this requirements document
- Discuss user needs and recommendations for each business process
  - Introduce business process and present assumptions
  - Ask questions on needs
  - Open discussion



# Discussion Ground Rules

- Identify yourself prior to speaking
- Looking for recommendations and comments, not consensus
- Slides present straw man assumptions
  - Based on pilot project and EPA judgment
  - Meant to help focus feedback
  - Not “etched in stone”, but subject to evaluation and suggestions
- Be considerate of others’ feedback so everyone can be heard
- Focus on the essential needs of the hazardous waste community
  - Give feedback on what your organization needs
  - National operator will figure out how to address them



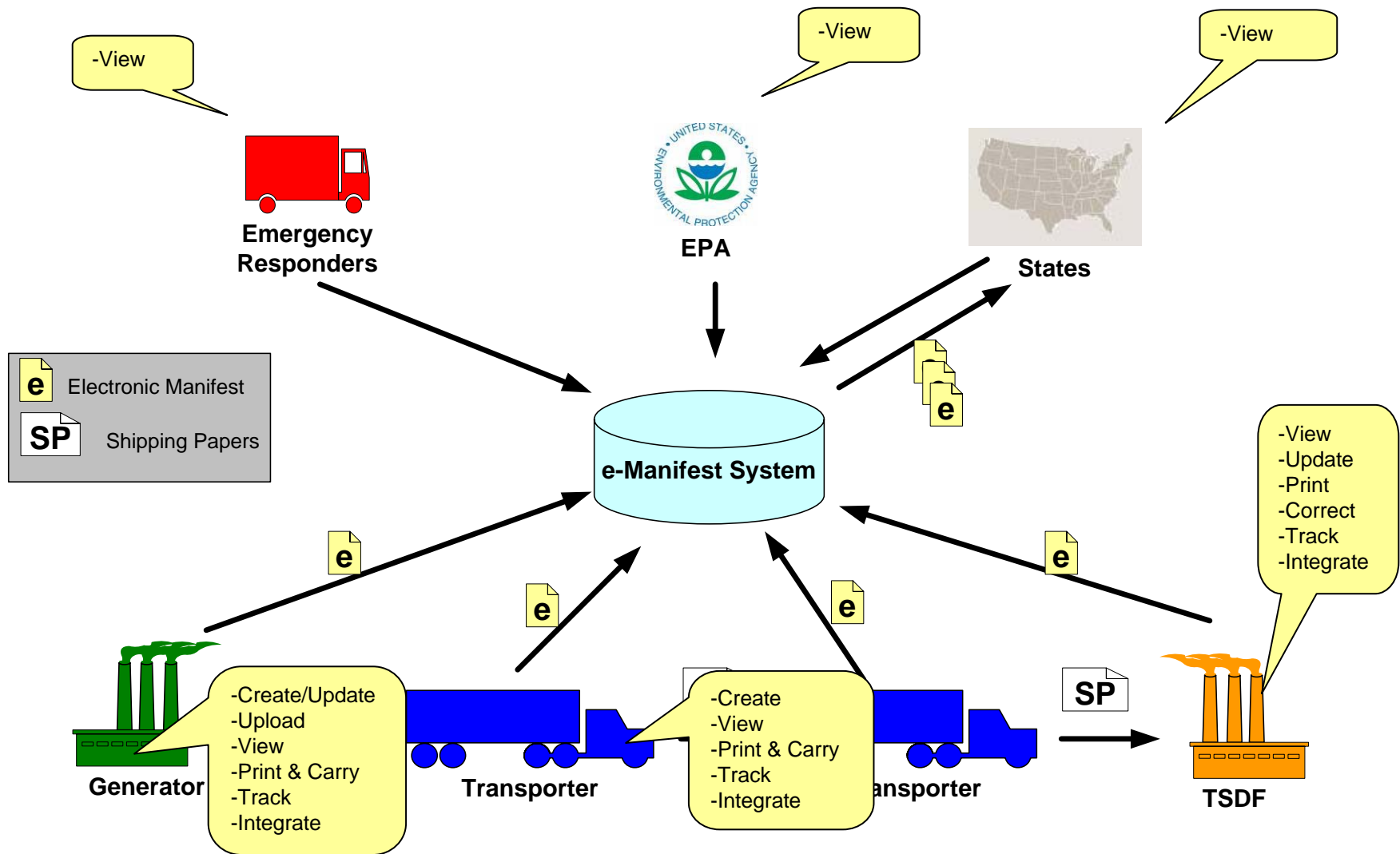
# Discussion Ground Rules

- Facilitators will elicit your recommendations, not to develop them
- Be respectful of time for breaks and discussions
- Discussions are being recorded for note taking purposes
  - Recordings will be deleted after the notes are published

# e-Manifest Current Approach

- Automates the paper-based manifest process
- Central repository for manifests
- Available to all users in all states
- Optional for waste handlers
- DOT shipping paper information must be carried in truck
- All handlers in shipment must participate, except in case of emergency
- Designed, developed, and operated by a national operator (contractor(s))
- Both federal and state regulated wastes
- Funded through user fees

# Business Process Overview



# e-Manifest Lifecycle Status

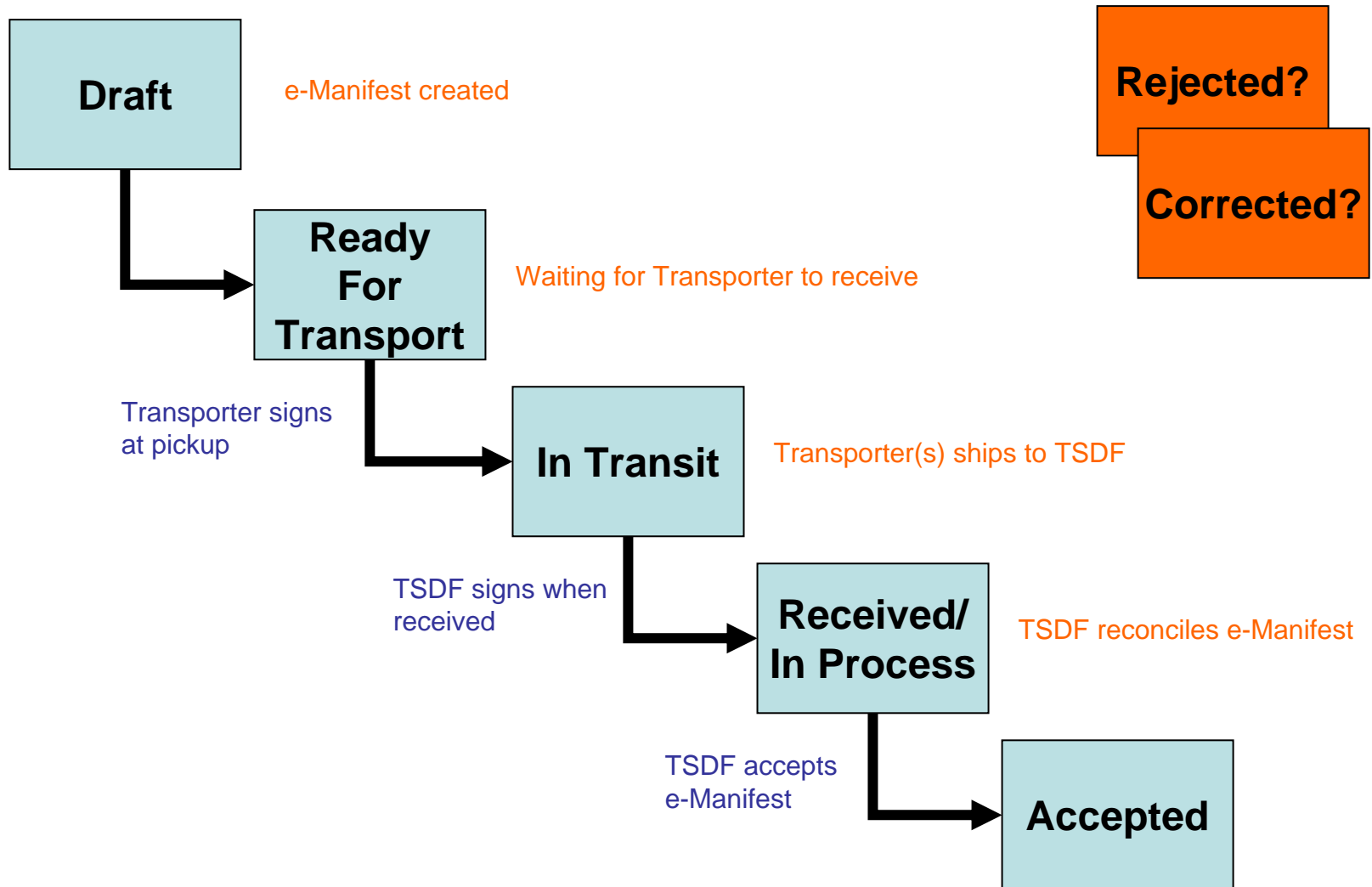
# e-Manifest Lifecycle Status Assumptions



Requirements  
Page 31

- e-Manifest has a lifecycle as it progresses through the chain of custody
- e-Manifest status records the standing of the manifest as it moves from DRAFT to ACCEPTED

# e-Manifest Lifecycle Status Assumptions

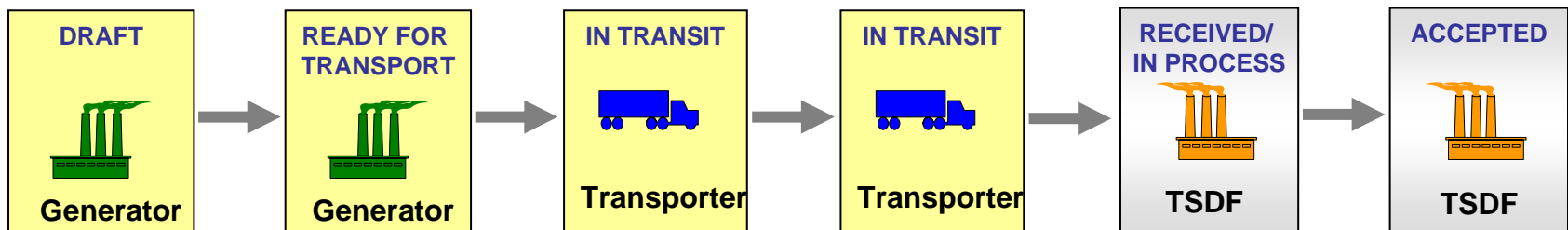


# e-Manifest Lifecycle Status Assumptions



Requirements  
Page 31

- **DRAFT**
  - Initial status when e-Manifest created
  - Status changes to READY FOR TRANSPORT upon generator or offeror signature
- **READY FOR TRANSPORT**
  - Initial transporter receives waste
  - Hard copy printed for vehicle
  - Status changes to IN TRANSIT upon transporter signature
- **IN TRANSIT**
  - Intermediate transporters receive waste and e-sign
  - Status changes to RECEIVED/IN PROCESS upon TSDF signature



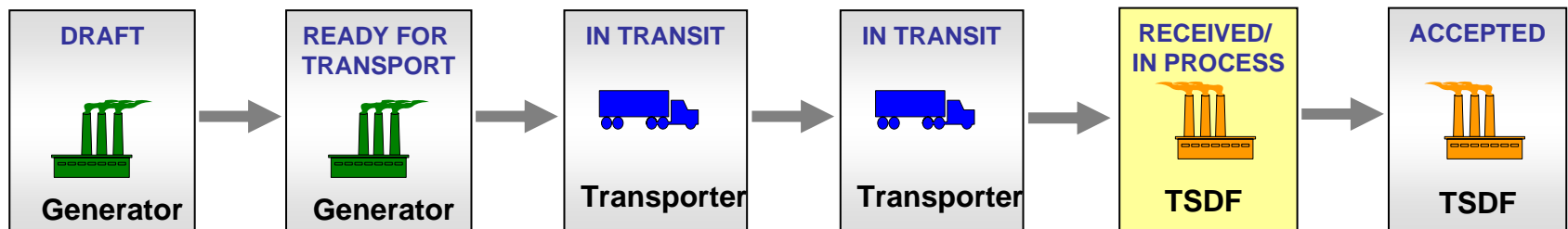
# e-Manifest Lifecycle Status Assumptions



Requirements  
Page 31

- **RECEIVED/IN PROCESS**

- TSDF reconciles wastes
- TSDF rejects in full or partially
- Full rejection requires entry of alternate facility on the same e-Manifest or 2<sup>nd</sup> e-Manifest
- Partial rejection creates 2<sup>nd</sup> e-Manifest
- Status changes upon
  - Lack of discrepancies
  - Discrepancies fully reconciled
  - Rejected waste received by alternate facility or generator
- Deadline before status automatically changed to ACCEPTED?

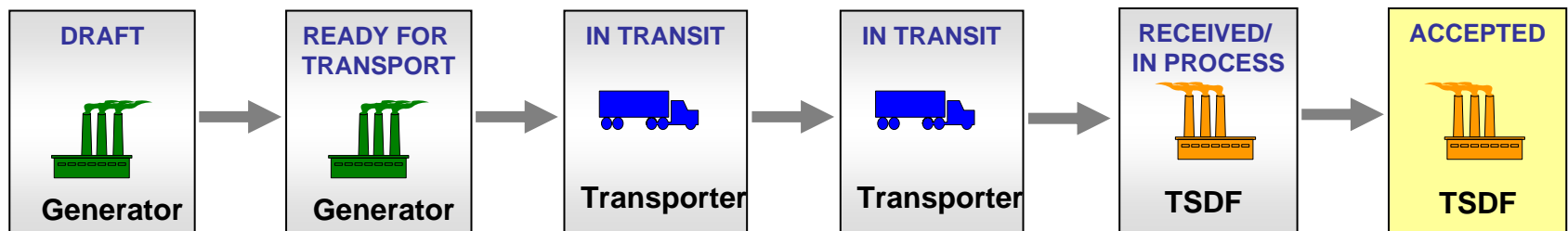




# e-Manifest Lifecycle Status Assumptions

- **ACCEPTED**

- All signatures complete
- Waste listed on e-Manifest matches waste received
- Is this the final state of e-Manifest?



# e-Manifest Lifecycle Status Discussion

- Any comments or questions on the overview?
- What statuses are necessary and how should they be defined?
- What should ACCEPTED mean?
- Are e-mail notifications needed among waste handlers to update them on the status? If so, what are they?

# e-Manifest Lifecycle Status Discussion

- How should the system handle transport emergencies requiring hardcopies?
- Any requirements on the format of the e-Manifest tracking number?
- What should happen if a non-participating transporter intervenes?
- Any differences in the process to track returned or forwarded shipments?

# Create/Update Generator Section of e-Manifest

# Create/Update Generator Assumptions

## Basic Data Elements

- Site and facility addresses
- Waste-related data
- Generator/ Offeror certification

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

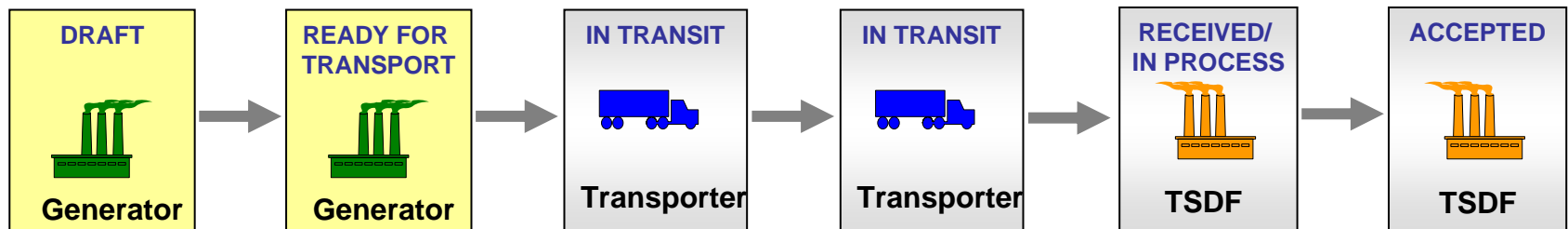
<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number <b>000327508 CEX</b>		
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)					
Generator's Phone:							
6. Transporter 1 Company Name		U.S. EPA ID Number					
7. Transporter 2 Company Name		U.S. EPA ID Number					
8. Designated Facility Name and Site Address		U.S. EPA ID Number					
Facility's Phone:							
GENERATOR	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1.						
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed Name		Signature		Month Day Year			

# Create/Update Generator Assumptions



Requirements  
Page 27

- Creation Options
  - Blank form
  - Template
  - Upload from external system
- Quick data entry
  - Pre-filled generator name and address
  - Associated list of facilities and handlers
  - Use templates of pre-populated data
  - Official list of federal and state waste codes
- Validations will catch data entry errors and inconsistencies
- Support transporter, broker, or TSDF creation on behalf of generator



# Create/Update Generator Discussion

- Any comments or questions on the overview?
- What would help simplify or speed the creation of e-Manifests?
  - Pre-filled data, find handlers, navigate DOT & RCRA waste lists, streamline
- Continuation sheet necessary in e-Manifest?
- Additional creation options?
  - Differences in processing for the creation options?
- What role should RCRAInfo have with e-Manifest?

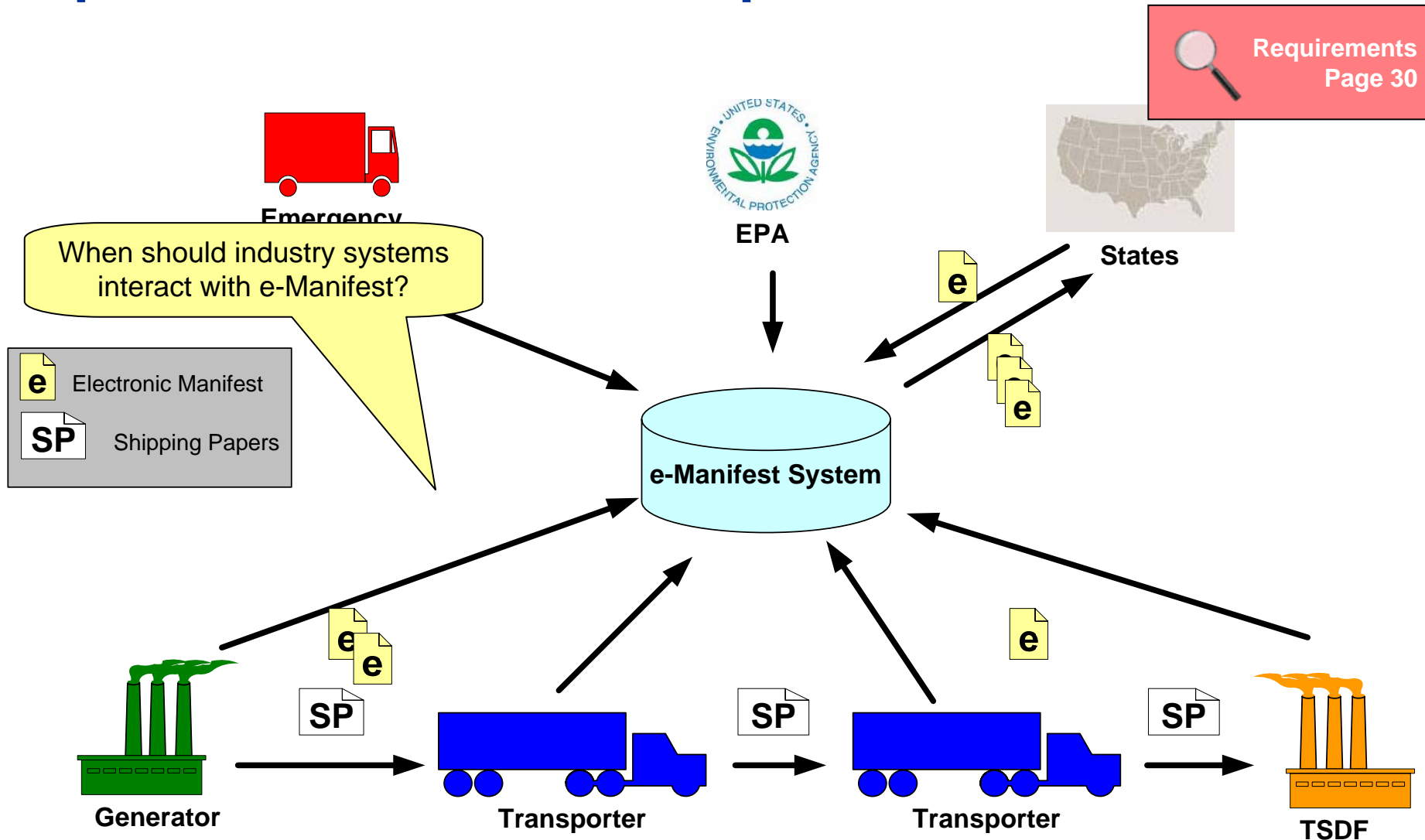
# Create/Update Generator Discussion

- What would help improve data quality?
  - What data validations are needed?
  - What validation errors prevent creation? Prevent signature?
  - Duplicate checks necessary?
- Are e-mail notifications needed among waste handlers to update them on the status? If so, what are they?



# Upload e-Manifest

# Upload e-Manifest Assumptions

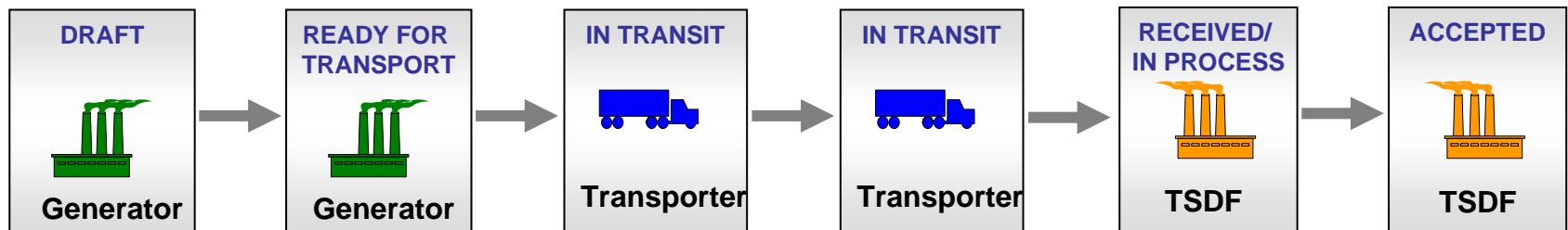


# Upload e-Manifest Assumptions



Requirements  
Page 30

- External systems can create e-Manifests and upload them
- Defined interfaces for data transfers
  - Published standards on services and data XML formats
- Various systems will handle different business processes
- Upload could be:
  - e-Manifest creation
  - e-Manifest signature update
  - e-Manifest correction



# Upload e-Manifest Discussion

- When should industry systems interact with e-Manifest?
  - What are the key process points?
- How much workflow can occur offline?
- Should imported e-Manifests be processed differently?
- How can we ensure data integrity if e-Manifest workflow is shared between systems?
- What is the copy of record for imported e-Manifests?

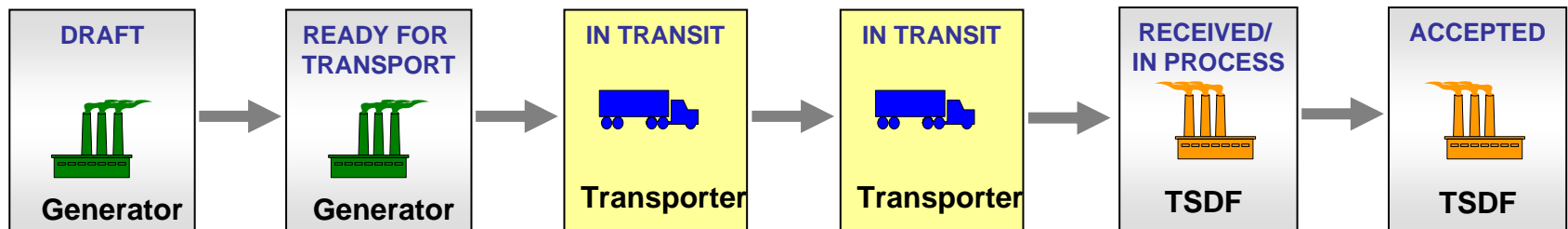
# **Update Transporter Section of e-Manifest**

# Update Transporter Section Assumptions

## Basic Data Elements

- Transporter name
- Signature
- Date

TRANSPORTER INTL	16. International Shipments					
	<input type="checkbox"/> Import to U.S.		<input type="checkbox"/> Export from U.S.		Port of entry/exit: _____	
	Transporter signature (for exports only): _____					
	Date leaving U.S.: _____					
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials					
	Transporter 1 Printed/Typed Name			Signature		Month   Day   Year
	Transporter 2 Printed/Typed Name			Signature		Month   Day   Year



# Update Transporter Section Discussion



Requirements  
Page 35

- Any comments or questions on the overview?
- What type of data update capabilities do transporters need?
- Are e-mail notifications needed among waste handlers to update them on the status? If so, what are they?
- Any special considerations for transfer stations?

# **Print and Carry e-Manifest**

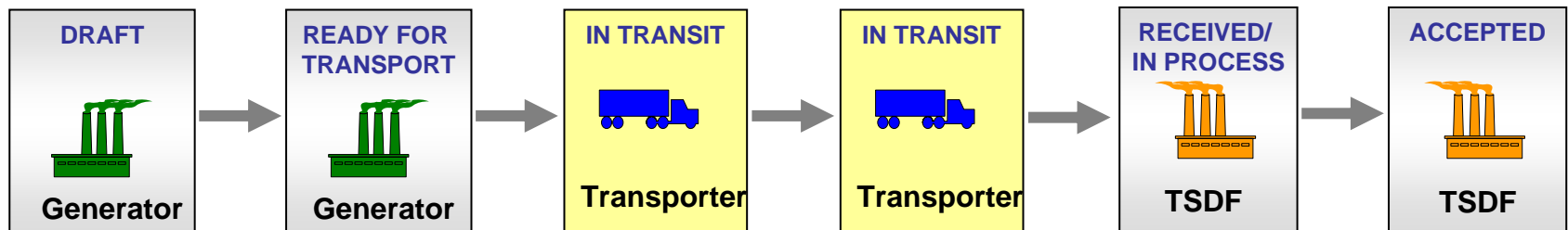


# Print and Carry e-Manifest Assumptions



Requirements  
Page 36

- DOT information must be carried on truck
- Date and typed names of signature appear on printouts
- Any user associated with the e-Manifest can print
- Only generators can print DRAFT manifests



# Print and Carry e-Manifest Discussion

- Any comments or questions on the overview?
- What are the printing needs? What situations require printing?
- Should necessary copies be printed automatically?
- Are mobile printers available to transporters?
- What if a state downloads manifests locally and then corrects them?
  - What is the copy of record?

# **Update TSDF**

## **Section of e-Manifest**

# Update TSDF Section Assumptions

## Basic Data Elements

- Discrepancies
- Alternate facilities
- Management codes
- Signature

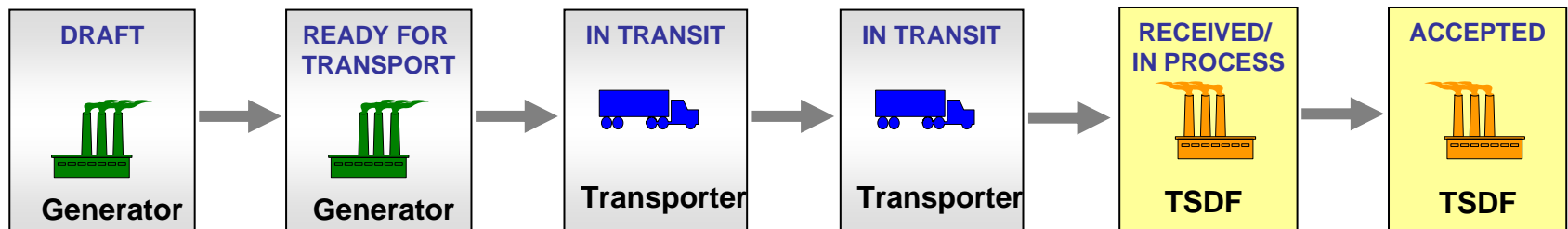
DESIGNATED FACILITY	18. Discrepancy													
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection													
	Manifest Reference Number:													
	18b. Alternate Facility (or Generator)					U.S. EPA ID Number								
	Facility's Phone:													
	18c. Signature of Alternate Facility (or Generator)													
	Month Day Year													
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)													
1.		2.		3.		4.								
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a														
Printed/Typed Name					Signature					Month Day Year				

# Update TDSF Section Assumptions



Requirements  
Page 40-43

- Allow TDSF to receive shipment and reconcile any differences
  - System will store data on discrepancy category and description
- Audit tracking will record all changes (user and date) to the e-Manifest
- Management codes entered
- Waste may be rejected
  - Full rejection will require return to generator or forward to alternate facility
  - Partial or late rejection will create new manifest for return to generator or forward to alternate facility
- TSDF section locked until generator and transporter signatures entered



# Update TDSF Section Discussion

- Any comments or questions on the overview?
- What would help simplify or speed the reconciliation and rejection of e-Manifests?
- What type of data update capabilities do TSDFs need?
- Are e-mail notifications needed among waste handlers to update them on the status? If so, what are they?
- When is acceptance of waste overdue?
- How long can waste be staged?

# Update TDSF Section Discussion

- What should happen when waste is rejected?
- What is needed to distinguish initial receipt versus full acceptance?
- What should happen when waste is forwarded?
- What information is needed to link old and new manifests for rejected waste?

# **Correct** Downstream Errors

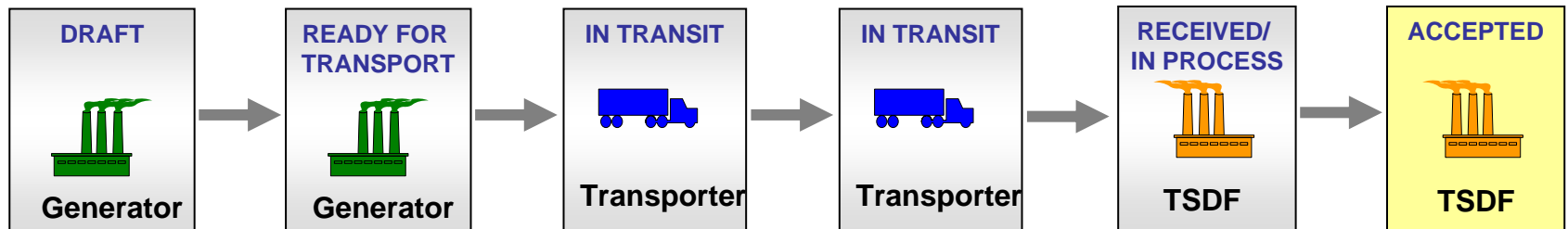


# Correct Downstream Errors Assumptions



Requirements  
Page 39

- Mistakes may be found at anytime
  - Typos, missing information
- Need ability to correct mistakes
- Audit tracking will record all changes (user and date) to the e-Manifest



# Correct Downstream Errors Discussion

- Any comments or questions on the overview?
- Can e-Manifests be corrected during waste handling and after acceptance?
- Who can correct e-Manifests?
- What sections can be corrected?
- What type of errors could exist even with system edit checks?
- What is the copy of record for corrected e-Manifests?

# Correct Downstream Errors Discussion

- Should certain statuses prevent corrections?
- Should there be a deadline for corrections?
- When can the e-Manifest be deleted and by whom?
  - DRAFT, READY FOR TRANSPORT, IN TRANSIT, RECEIVED/IN PROCESS, ACCEPTED

# **View e-Manifest**

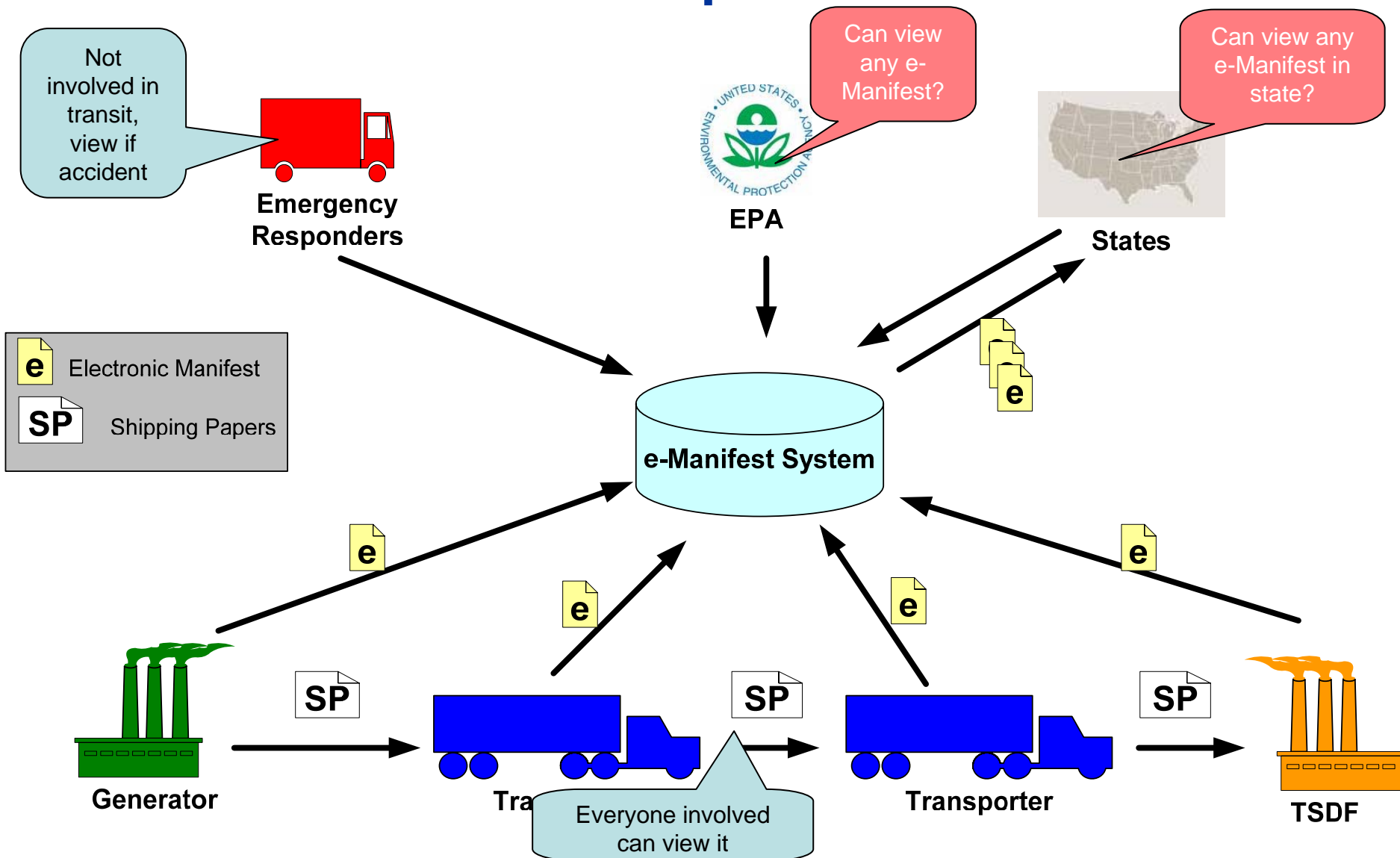
# View e-Manifest – Assumptions



Requirements  
Page 4,39,52

- View function gives users the ability to search for and view manifests
- Need to quickly find e-Manifests (both new and old)
  - Search using various search criteria
- Blackout period before available to users not involved in shipment

# View e-Manifest - Assumptions



# View e-Manifest Discussion

- Any comments or questions on the overview?
- What search fields should be available to quickly find e-Manifests?
- Who can view the e-Manifest in the blackout period?
- Should e-Manifest in portable devices be human readable? How do you know that version is the correct e-Manifest to sign?
- Which States, at a minimum, should have access to an e-Manifest (e.g., generator State, destination State)?
- Should all States and emergency responders have read-access to other State's e-Manifests?

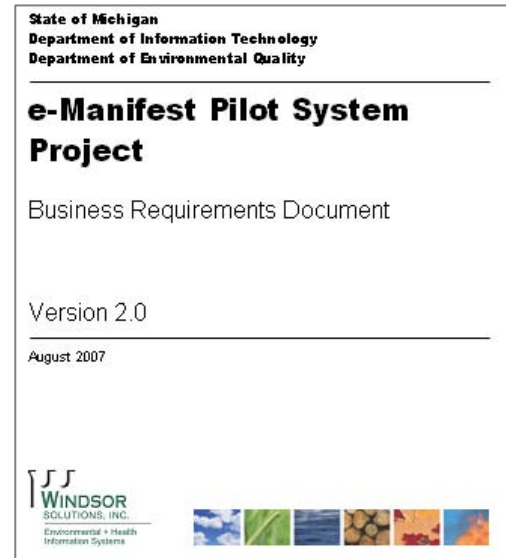
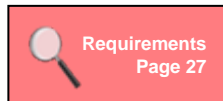
## **Section #2**

**e-Manifest Administrative Requirements, Data Access Requirements, And Data Quality Requirements**



# Section #2 Facilitation Process

- Review the basic e-Manifest business processes
  - Most business processes based on the state pilot system
  - Refer to the “**e-Manifest Pilot System Business Requirements Document**” (Requirements Document)
  - Pages numbers in upcoming slides refer to this requirements document
- Discuss user needs and recommendations for a variety of administrative, data access and data quality requirements.
  - Introduce topics and present assumptions
  - Ask questions on needs
  - Open discussion



# Discussion Ground Rules

- Identify yourself prior to speaking
- Looking for recommendations and comments, not consensus
- Slides present straw man assumptions
  - Based on pilot project and EPA judgment
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  - National operator will figure out how to address them

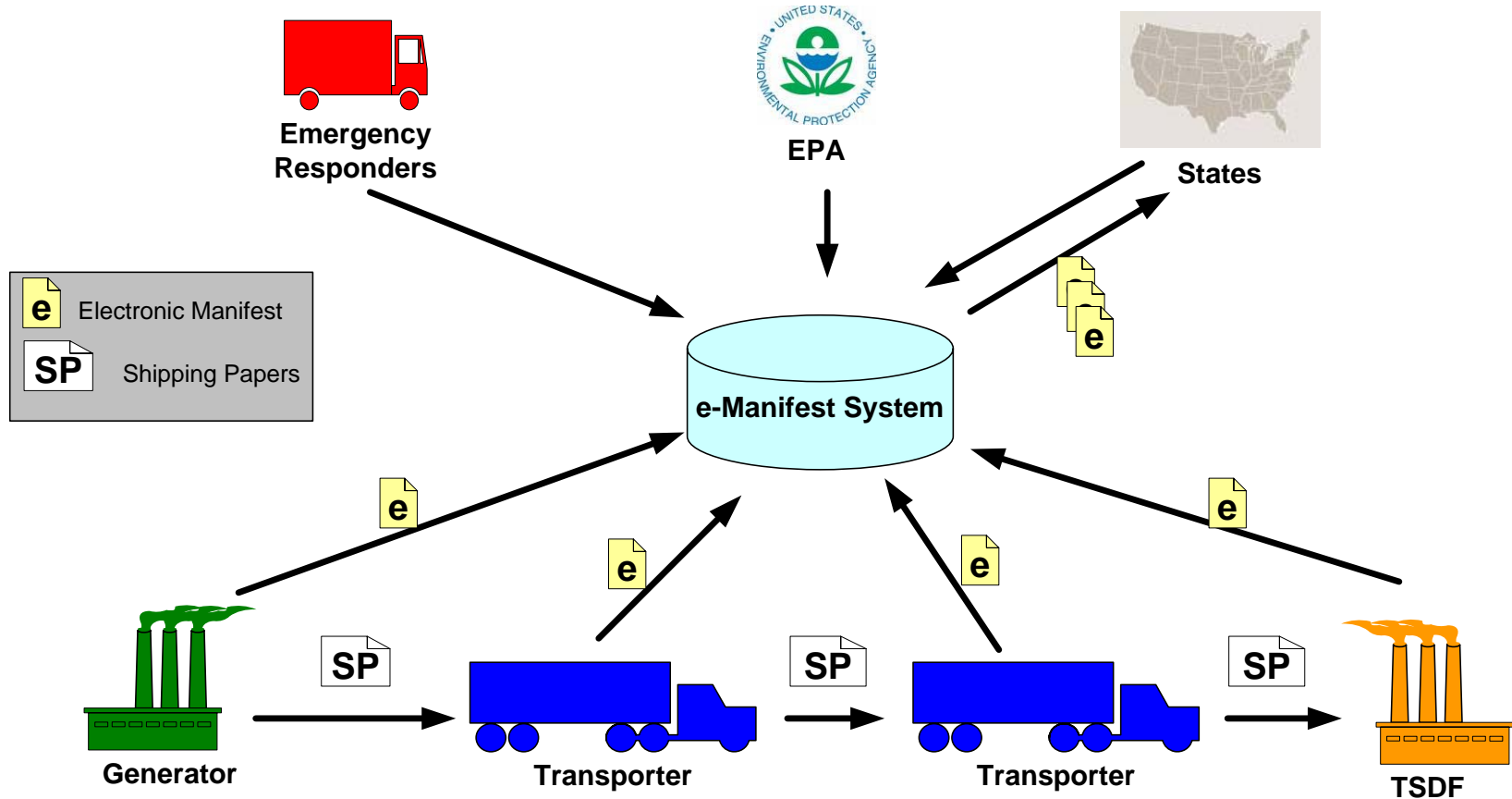
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- Be respectful of time for breaks and discussions
- Discussions are being recorded for note taking purposes
  - Recordings will be deleted after the notes are published

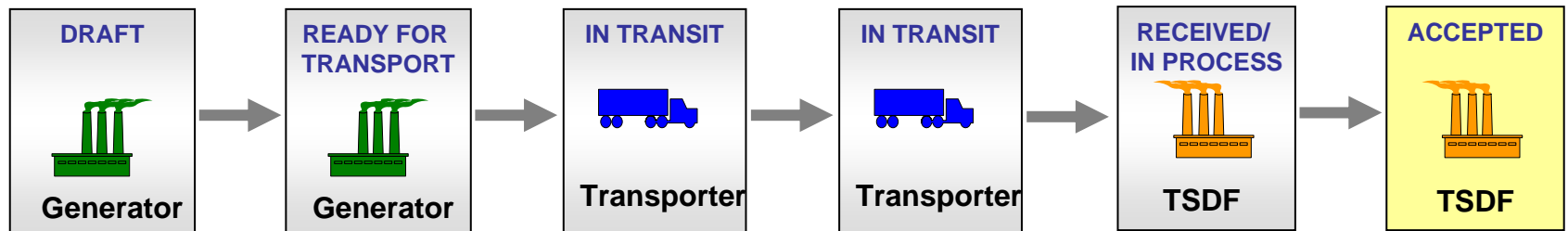
# e-Manifest Current Approach

- Automates the paper-based manifest process
- Central repository for manifests
- Available to all users in all states
- Optional for waste handlers
- DOT shipping paper information must be carried in truck
- All handlers in shipment must participate, except in case of emergency
- Designed, developed, and operated by a national operator (contractor(s))
- Both federal and state regulated wastes
- Funded through user fees

# Business Process Overview



# e-Manifest Status Terminology



# Create and Manage Accounts

# Create and Manage Accounts: Assumptions



Requirements  
Page 47-49

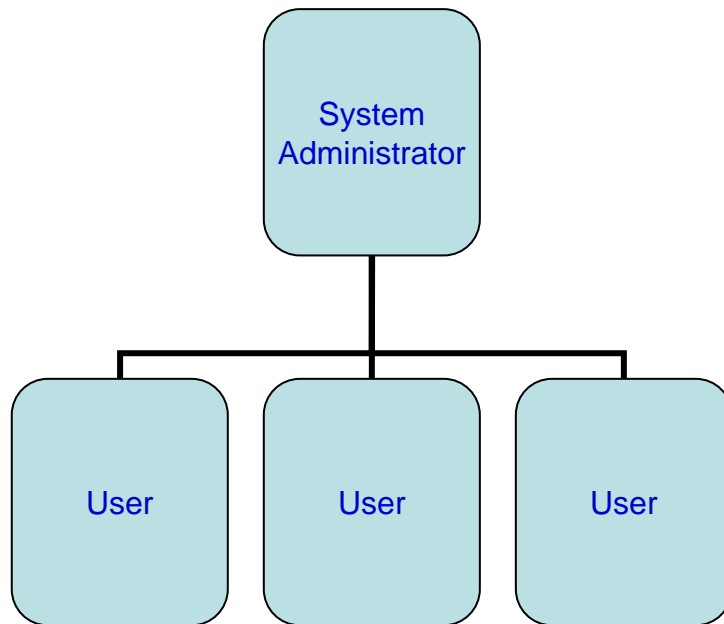
## User Registration

- System will be accessible only to registered users.
- Users self-register and receive approval before gaining account access
- Administrator will have authority to:
  - Approve/deny user account requests
  - Deactivate user accounts
- Once registered
  - Users can update their own registration information as needed
  - Password and username help will be provided
  - Signatory authority can be added with appropriate verification and approval

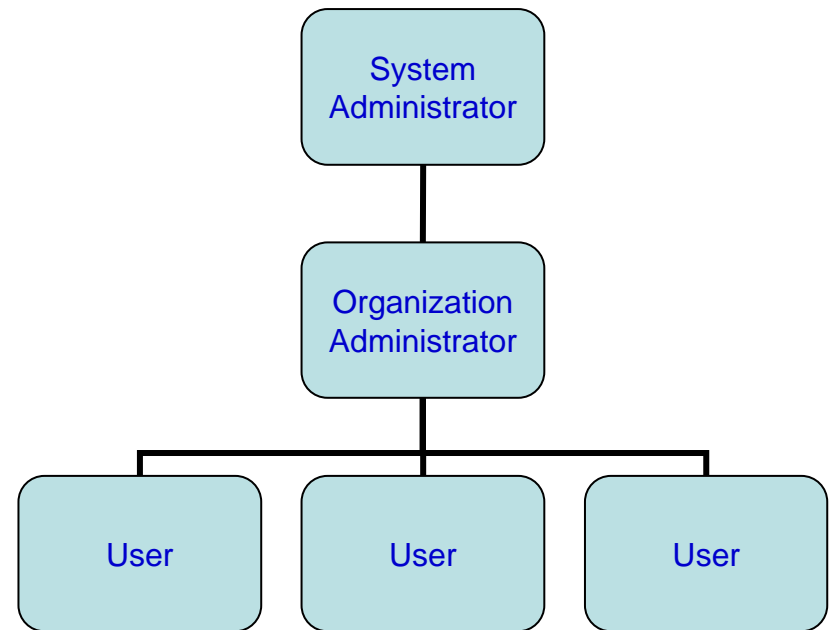


# Create and Manage Accounts

## Direct Security Administration



## Distributed Security Administration



What role might an Organization Administrator play in the account creation and management process?

# Create and Manage Accounts: Assumptions



Requirements  
Page 47-49

## User Approval Process

- Users register and set up a password
- Users indicate desired status
  - Author
  - Signatory
  - Administrator
- Signatory authority requires special processing
- System Administrator
  - Reviews request
  - Obtains Organization Administrator input, if applicable
  - Approves or denies user request

# Create and Manage Data: Discussion

- What account creation/management security is needed to protect data privacy and data integrity?
  - What kinds of verification/ authentication are needed?
  - On what basis should account approvals be granted?
- What account information is needed?

## **Individual User**

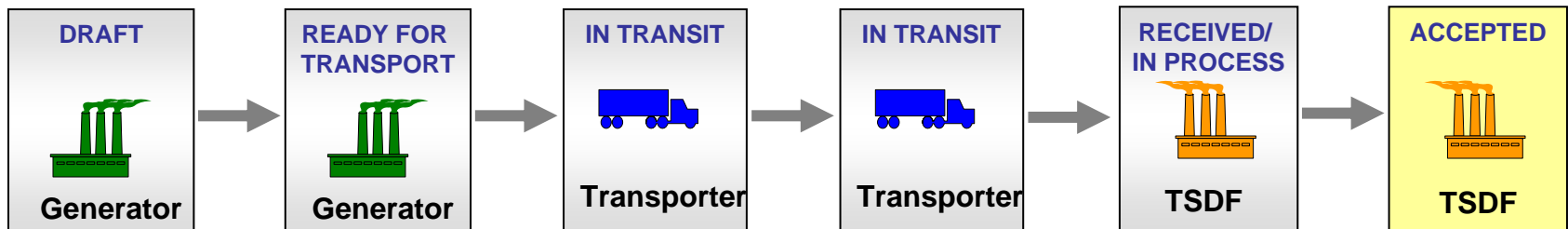
- Individual name
- Phone number
- email address

## **User Organization**

- Company name
- RCRA Site ID number
- Multiple Sites
- State

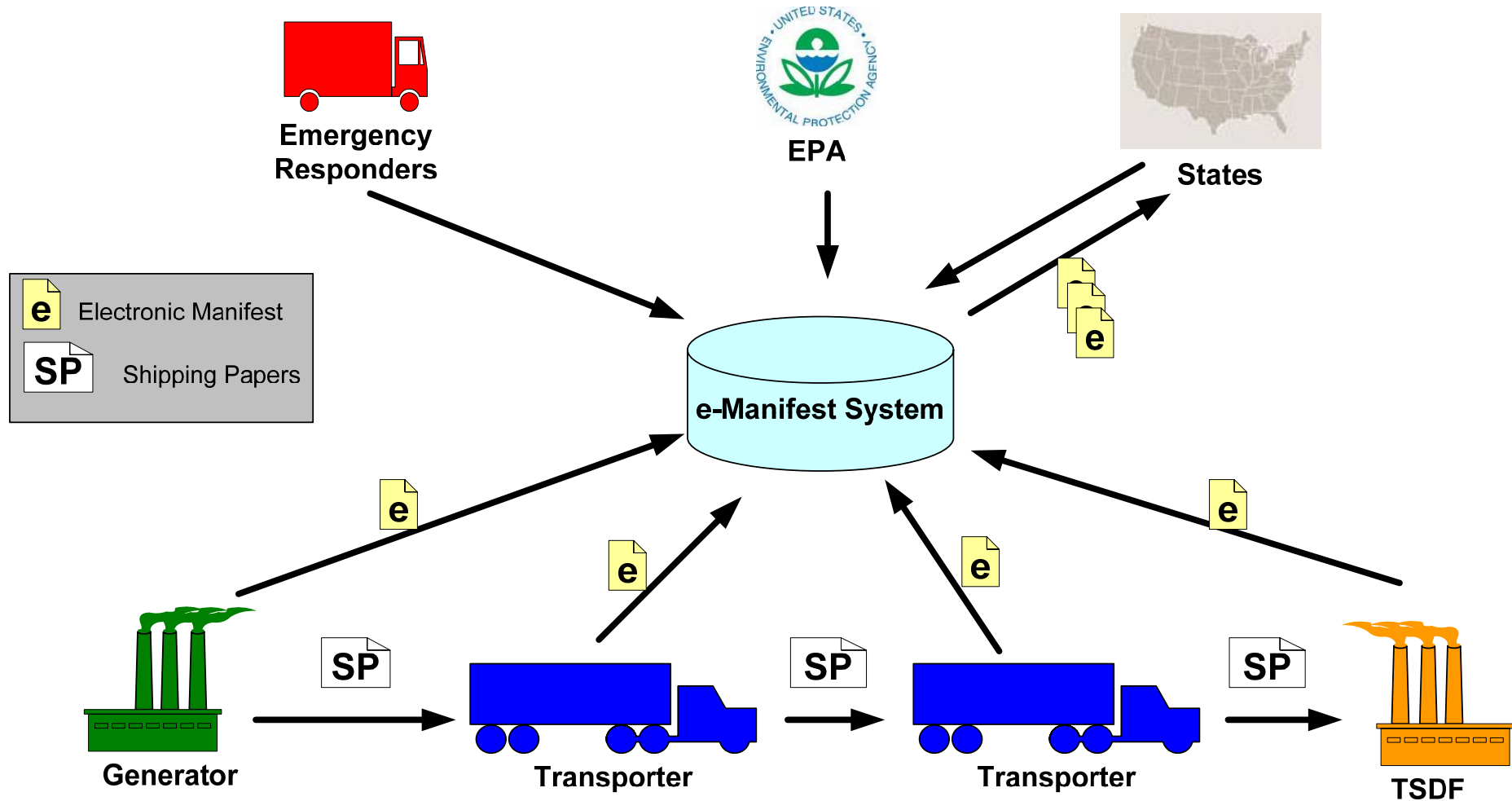
# Create and Manage Data: Discussion

- What restrictions, if any, should there be on what account information a user can modify?
- Should any personally identifiable information be required (e.g., To verify identity at setup? To provide username and password help?)
- What safeguards are needed to ensure that users protect their account privacy appropriately?



# Access Data

# Access Data: Assumptions



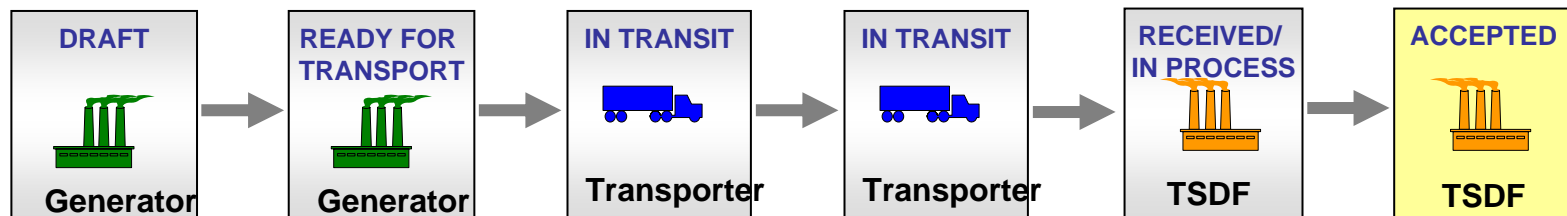
# Access Data

## Assumptions: State Issues

- State agencies involved in emergency response will have access to manifest data.
- Transit states cannot be known in advance because transporters can take multiple routes.

## Discussion: State Issues

- What access do Generator and Receiving states need?
- What access do transit states need, beyond emergency responders?
- What access do unrelated states need?

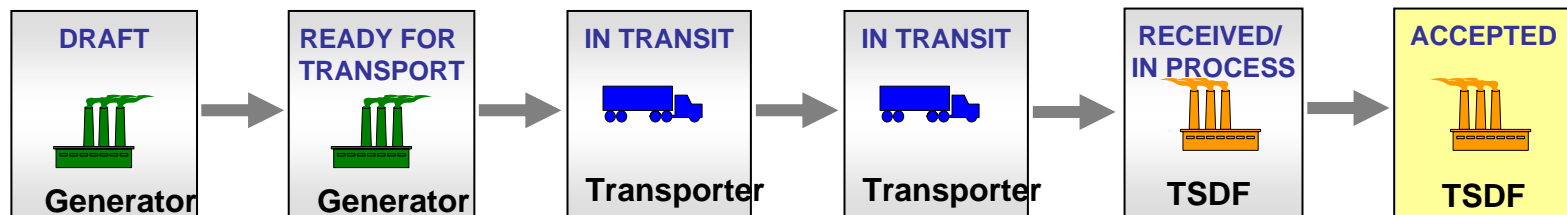


# Access Data: Discussion



Requirements  
Page 52-55

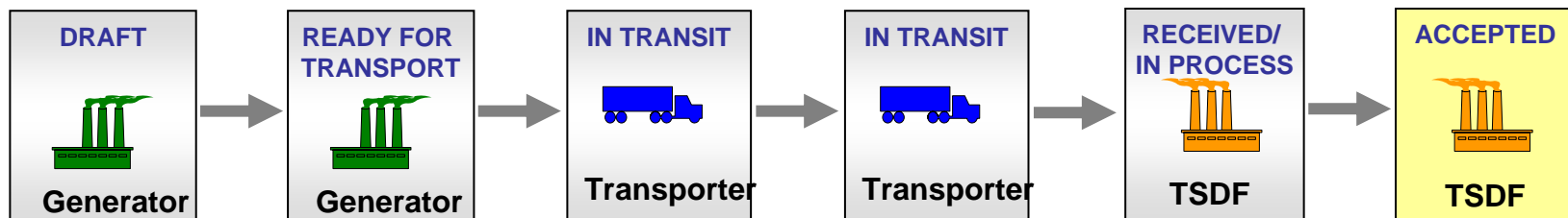
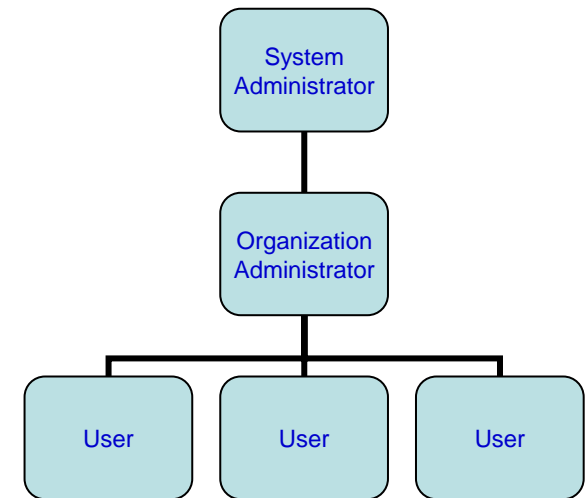
Draft Manifest Data	<ul style="list-style-type: none"><li>– Generator</li><li>– Generator representative (e.g., transporter generating manifest)</li></ul>
In-Transit to Accepted Manifest Data	<ul style="list-style-type: none"><li>– Principals (All users associated with the manifest – generator, transporters, TSDF)</li><li>– States</li><li>– Emergency responders</li></ul>
Post “Blackout Period” Manifest Data	<ul style="list-style-type: none"><li>– Principals</li><li>– States</li><li>– Citizens (only via FOIA)</li></ul>





# Access Data: Discussion

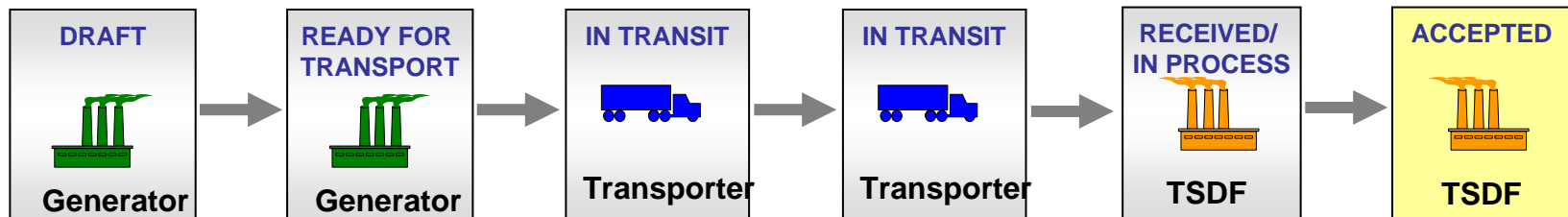
- Distributed security administration system issues within the organization:
  - View colleagues' manifests?
  - Modify manifests created by colleagues?
  - Organization Administrator needs?
- Any special issues for different shipment statuses?



# Access Data: Discussion

## Issues when partners provide manifests for Generators

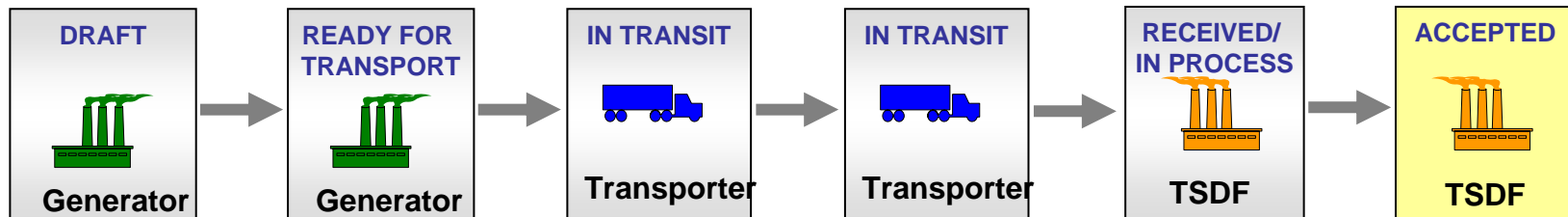
- What access needs do the two parties have when the manifest is in Draft status?
- Are the access needs for the two parties any different than in a generator-developed manifest after the Draft stage?



# Access Data: Discussion

Create/Read/Update/Delete

	User Account Information	Manifests/Data: In process	Manifests/Data: Final
Manifest Users	CRUD	CRUD	RU
Organization Administrators	RUD	RUD	RU
State Regulators		R	RU
System Administrator/National Operator	RUD	RUD	RUD
EPA	R	R	R
Emergency Responders		R	
<b>After Blackout Period</b>			
Other Federal Agencies			R
Public via FOIA			R



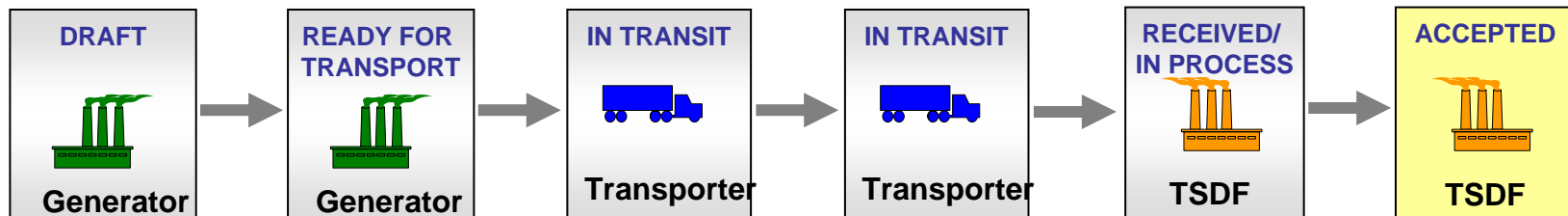
# Access Data

## Assumptions

- Automatic status notification will be available.
- NIST requires dual notification methods.
- At account creation, user can determine what system notifications to receive.

## Discussion

- What notifications are needed?
- What methods would be most helpful?



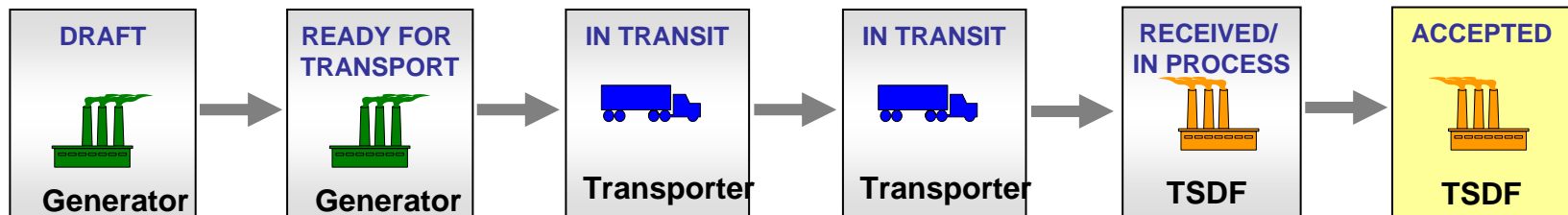
# Access Data

## Assumptions

- Changes may be required at any point in the process.
- Multiple principals may be interested in changes made.

## Discussion

- What are your needs for making changes during shipment?
- What are your needs for making changes after shipment?
- Should there be a time limit on changes?
- What notification or concurrence methods would be most helpful?



# Extract Data

# Extract Data: Assumptions



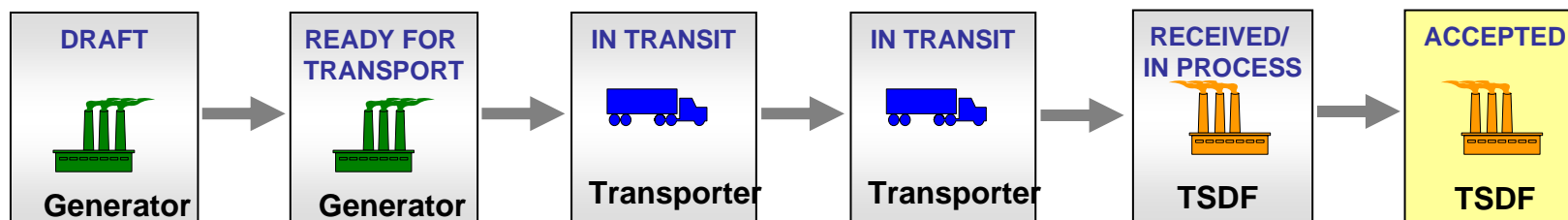
Requirements  
Page 46-47, 52-55

*NOTE: Specific reports and queries are discussed in the next section.  
This section looks at the mechanics of data extraction.*

- e-Manifest data must be available in formats compatible with existing systems
- Users will need the ability to customize information requests
- Users will need access to both reports and raw data records
- The system should support automated data transfer.
- The system will link to other EPA systems

# Extract Data Discussion

- Who should be permitted to extract e-Manifest data?
  - Manifests
  - Reports
  - Raw data records
- What kinds of customization will be needed?
  - Bulk downloads?
  - Update only feature?
  - Other?
- What features are needed to support automated data transfer?
- What linkages to other EPA systems are required?
- Other required features?





# Extract Data : Accommodate Legacy Systems

## Assumptions

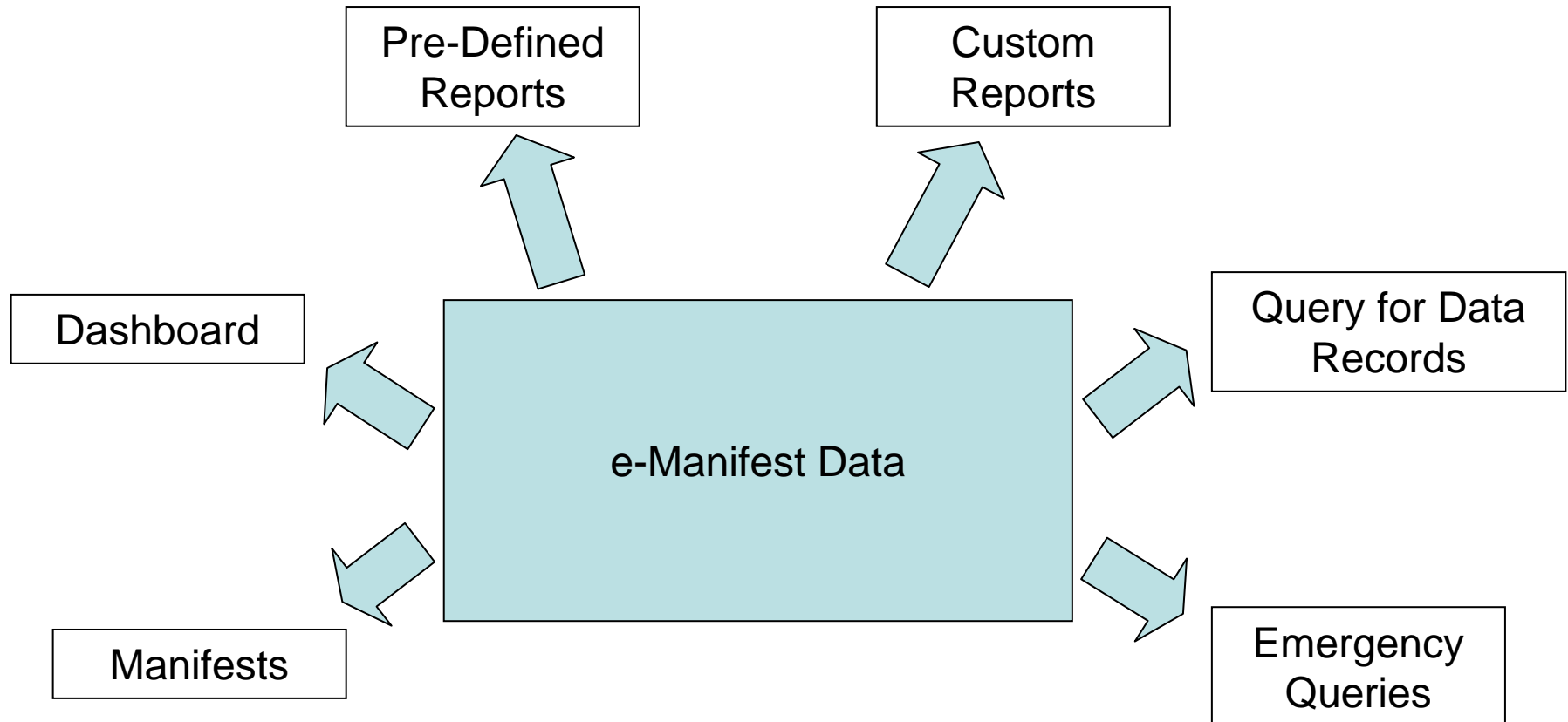
- Users with legacy systems need input into e-Manifest system development to maximize compatibility.
- Users are expected to provide input to the National Operator at start-up.
- The existing Governing Board will ensure that users have continuing input.
- The Change Management Process (CMP) will collect user input regularly.

## Discussion

- What characteristics are critical in the user input process?
  - Equity?
  - Openness/transparency of process?
  - Timing?
  - Other?

# Report and Query System

# Report and Query System: Assumptions

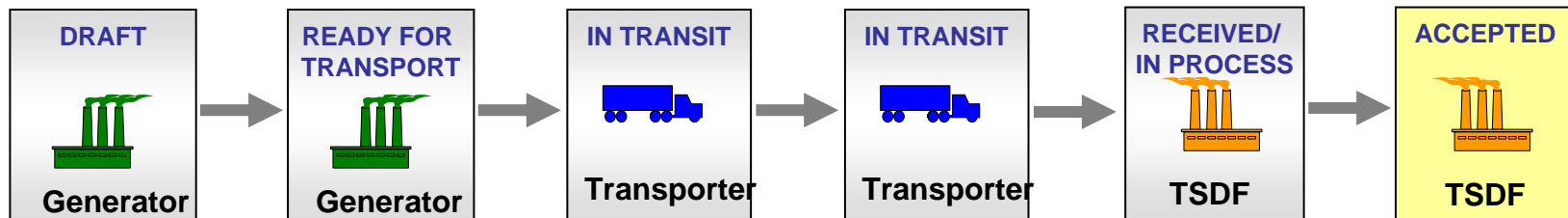


# Report and Query System Assumptions: Dashboard Reports



Requirements  
Page 52

- At-a-glance Information
  - The first screen presented to the user upon login to the e-Manifest system
  - Includes summary information most relevant for the user
- Timing for inclusion in dashboard:
  - Generators: From DRAFT stage
  - Others: After manifest is marked **READY FOR TRANSPORT**



# Report and Query System Discussion: Dashboard Reports

- What features will make the dashboard screen most useful?
- Are there differences in needs for Principals and States?

# Report and Query System Discussion:

## Possible Pre-Defined Facility Reports



Requirements  
Page 52-53

<b>Delinquency Reports:</b>	e-Manifests that are, or will be, delinquent according to defined business rules (e.g., shipment has been in transit for over 10 days, etc.).
<b>Status Reports:</b>	e-Manifests broken down by status (e.g., DRAFT, IN TRANSIT, ACCEPTED, etc.).
<b>Comparison Reports:</b>	Ability to compare the current version of an e-Manifest with previous versions (i.e., edit history, etc.).
<b>Compliance Summary Reports:</b>	Ability to view, for example, generators who under-reported their waste x% of the time, or by x% of actual, etc.

### Discussion:

- Reactions to these report concepts?
- Ideas about other reports that should be pre-defined?

# Report and Query System Discussion:

## Possible Pre-Defined State Agency Reports



Requirements  
Page 53-54

<b>Delinquency Reports:</b>	Facilities currently or historically delinquent according to defined business rules (e.g., 45 days past initial receipt by transporter, etc.).
<b>Status Reports:</b>	e-Manifests broken down by status (e.g. IN TRANSIT, RECEIVED/IN-PROCESS, ACCEPTED, etc.)

### Discussion:

- Reactions to these report concepts?
- Ideas about other reports that should be pre-defined?

# Report and Query System :

## Custom Reports

### Assumptions:

- Facilities and States will have the opportunity to develop custom reports
- Only principals and generator/receiving states will have access to data.
- Requirements would include:
  - Filter data by parameters (e.g., geographic location, status, handler type, dates, etc.)
  - Sort data by parameters
  - Drill down/through to additional manifest detail
  - Print friendly version
  - Export report results to various formats (CSV, XML, etc.)

### Discussion:

- How can this system be most effective?
- What else is needed?



# Report and Query System Discussion: Emergency Responders



Requirements  
Page 54-55

## Assumptions:

- When shipping papers are not available, responders need ability to run customized queries.
- Emergency responders will have access to all e-Manifest data except those manifests in a DRAFT status.
- Emergency Responders will be able to use the custom query functions to obtain needed data.

## Discussion:

- What do emergency responders need from the system?

# Report and Query System Discussion:

## Administrative Queries

**What administrative data should the system track?**

- **Audit Trail**
  - Date
  - Time
  - IP address
  - User ID
  - Other?
- **System Reliability**
  - Log-on effort failed
  - System down when someone tried to use it
  - Wait time to execute commands
  - Number of help requests pending
  - Other?

# Archiving

# Archiving Assumptions

- Must comply with
  - RCRA (3 years)
  - NARA (will likely be developed)
  - State Requirements
- Longer retention of some records may be desirable
- Data storage is costly
- Archives must be structured to accommodate
  - Evolution of software
  - Hardware improvements
  - Image formats

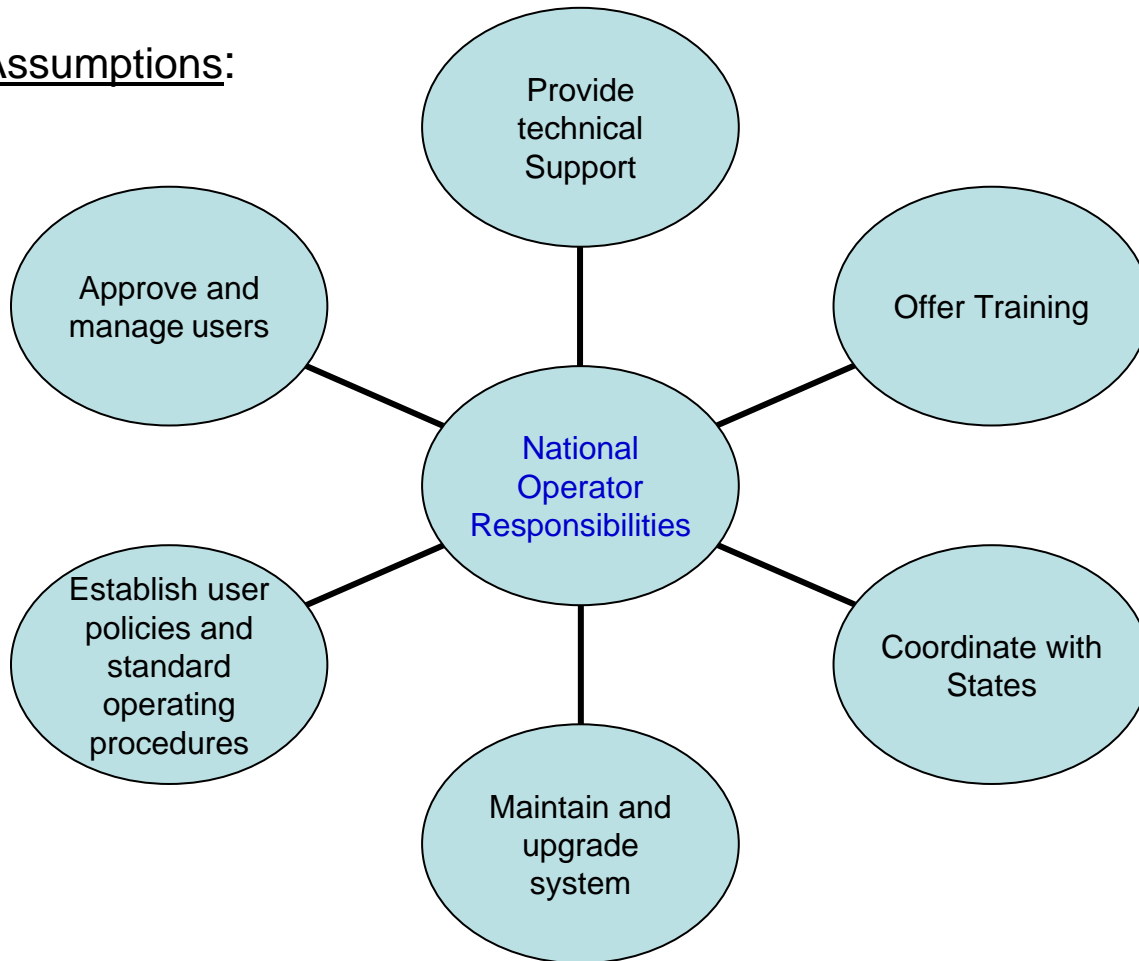
# Archiving Discussion

- What data might need to be retained beyond the RCRA-required 3-year period?
- How long would such data need to be kept?

# **National Operator/System Administrator Functions**

# National Operator Functions Overview

## Assumptions:



## Discussion

- Are these the right roles?
- What communication/coordination is needed when making changes to the system or procedures?

# **Manage** Reference Data



# Manage Reference Data



Requirements  
Page 46-47, 50-51

## Assumptions:

- Reference data needed
  - RCRA handler data
  - State handler data
  - Federal waste codes
  - State waste codes
- Criteria for successful management
  - Up-to-date
  - Accurate
  - Complete

## Discussion:

- What other reference data are needed?
- What other criteria for successful management?

# Manage Reference Data : Handlers



Requirements  
Page 46-47, 50-51

## Assumptions:

- e-Manifest will
  - Download handler data
  - Create “Associated Handlers” list
  - Use it to populate fields accurately
  - Make Associated Handler drop-down info available to all users in an organization
- Handler data include
  - ID number
  - Name/mailing address/phone
  - Site address
  - Waste handler type (e.g., SQG, LQG, TSD)
- Corrections to handler data may be needed
  - States can create, update, and delete Handlers
  - Users can enter Handlers recently assigned a RCRA site identification number

## Discussion:

What else is needed?

# Manage Reference Data : Waste Codes



Requirements  
Page 47

## Assumptions:

- Federal and state regulated waste codes can be downloaded
- These codes can be used to create a lookup table for the facility
- Users may
  - Add waste codes
  - Modify waste codes
  - Delete waste codes
- Code changes will have associated effective dates
- Codes, once used by the organization in a manifest, cannot be deleted; deactivation permitted instead.

## Discussion:

What else is needed?

# Performance Metrics

# Performance Metrics Overview

## Assumptions:

- Monitoring performance is essential for continuous improvement
- Performance measurement requires
  - Concrete, measurable metrics
  - Factors that are important to system users
  - Factors within the control of those being evaluated.
- With effective measurement, the National Operator can be held accountable for delivering quality service

# Performance Metrics: Discussion

- What criteria will you use to judge the system's performance?
- How would you like to see those criteria measured?

Sample Criteria	Sample Measures
<ul style="list-style-type: none"><li>• System availability</li><li>• System speed</li><li>• User support (availability of help; speed and accuracy of responses)</li><li>• Data backup</li></ul>	<ul style="list-style-type: none"><li>• I experience system down time no more than X.</li><li>• When I give a command, I wait no more than X.</li><li>• When I need help, I my problem is addressed within X.</li><li>• Backup data is never more than X old.</li></ul>

# Data Quality

# Data Quality: Assumptions

- Pre-filled fields (e.g., ID populates name and address information)
- Templates (User saves manifest with completed fields for multiple reuses)
- Drop-down menus such as
  - Associated list of facilities and handlers
  - Federal and state waste codes
- Build quality control into the e-Manifest system
  - Data validation
  - Internal consistency checks
  - Error prompts to flag missing or mis-keyed data



# Data Quality Discussion: Data entry

What features or needs do you have for:

- Pre-filled fields?
- Drop-down menus?
- Templates?
- Validation/data entry error alerts?

# Data Quality Discussion: Generator

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved, OMB No. 2050-0039

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number <b>000327508 CEX</b>		
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)					
Generator's Phone:							
6. Transporter 1 Company Name		U.S. EPA ID Number					
7. Transporter 2 Company Name		U.S. EPA ID Number					
8. Designated Facility Name and Site Address		U.S. EPA ID Number					
Facility's Phone:							
GENERATOR	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1.						
	2.						
	3.						
	4.						
14. Special Handling Instructions and Additional Information							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name		Signature		Month Day Year			

- Where do errors tend to occur and why?
- Where would drop-downs be helpful?
- Where would validation checks be helpful?

# Data Quality Discussion: Transporter and Designated Facility

TRANSPORTER INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Part of entry/exit: _____			
	Transporter signature (for exports only): _____ Date leaving U.S.: _____			
DESIGNATED FACILITY	17. Transporter Acknowledgment of Receipt of Materials			
	Transporter 1 Printed/Typed Name		Signature	Month Day Year
	Transporter 2 Printed/Typed Name		Signature	Month Day Year
	18. Discrepancy			
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection			
	Manifest Reference Number: _____			
	18b. Alternate Facility (or Generator)		U.S. EPA ID Number	
	Facility's Phone: _____			
	18c. Signature of Alternate Facility (or Generator)		Month Day Year	
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)			
1. _____		2. _____		
3. _____		4. _____		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a				
Printed/Typed Name		Signature	Month Day Year	

- Where do errors tend to occur and why?
- Where would drop-downs be helpful?
- Where would validation checks be helpful?

# Data Quality Discussion: Data Review

- Data review
  - Who should do it?
  - How often?
- Data corrections
  - Who is responsible?
  - What process?
- What kind of notifications would be needed?
- What kind of audit trail would be needed?

## Other Issues: Discussion

- What else should EPA consider as it develops the e-Manifest system?
- What needs do you have that we have not discussed?

# Day 2 Plenary

# User Fees

# User Fees - Assumptions

- National operator will set and collect fees to fund system development and operations
- Most assumptions based on proposed legislation (S.3109 in 110<sup>th</sup> Congress)





# User Fees - Assumptions

- Fee Level

- Fee structure
- Amount of cost recovery
  - Fees will recover the full cost of the e-Manifest system to EPA and National Operator for development, operations, maintenance, and upgrades
- Fee justification
  - Annual audit and biennial accounting report to Congress
- Fee adjustments
  - Fees will adjust to minimize accumulation of unused funds

- Fee Collection

- Fee collection process
  - May be collected in advance or in arrears
- Invoice frequency
- Paying party
- Deposit location
  - Fees deposited in “Hazardous Waste Electronic Manifest System Fund” within US Treasury

# User Fees Discussion

- What are the needs to handle fee processing?
- How should the fee be adjusted to cover shortages or surpluses?
- How should fee adjustments cover system enhancements?
- Fee per:
  - e-Manifest?
  - User?
  - Month as a subscription?
- Who pays the fees?
  - Generators
  - Transporters?
  - TSDFs?

# User Fees Discussion

- What payment options should be available?
  - Credit or debit card?
  - Electronic payment?
  - Pre-paid user accounts?
  - Pay.gov?
- What are the privacy concerns of payment transactions?
- What controls should govern the use of funds for system related expenditures?
- What are the needs for financial records and audit trails of transactions?

# Conference Call Dates

«	November 2008						»
S	M	T	W	T	F	S	
26	27	28	29	30	31	1	
2	3	4	5	6	7	8	
9	10	11	12	13	14	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28	29	
30	1	2	3	4	5	6	
7	8	9	10	11	12	13	

«	December 2008						»
S	M	T	W	T	F	S	
23	24	25	26	27	28	29	
30	1	2	3	4	5	6	
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30	31	1	2	3	
4	5	6	7	8	9	10	

«	January 2009						»
S	M	T	W	T	F	S	
21	22	23	24	25	26	27	
28	29	30	31	1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
25	26	27	28	29	30	31	
1	2	3	4	5	6	7	

«	February 2009						»
S	M	T	W	T	F	S	
25	26	27	28	29	30	31	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	
15	16	17	18	19	20	21	
22	23	24	25	26	27	28	
1	2	3	4	5	6	7	
8	9	10	11	12	13	14	